

**TRANSLATION****PATENT COOPERATION TREATY****PCT****INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference<br><b>IH-160</b>   | <b>FOR FURTHER ACTION</b>  | See Form PCT/IPEA/416  |
| International application No.<br><b>PCT/JP2005/002351</b>  | International filing date ( <i>day/month/year</i> )<br><b>16.02.2005</b> | Priority date ( <i>day/month/year</i> )<br><b>18.02.2004</b> |
| International Patent Classification (IPC) or national classification and IPC<br><b>C07D401/04, A01N43/56, A61K31/4439, A61P33/02, A61P33/06, A61P33/10, A61P33/12, A61P33/14</b> |  |  |
| Applicant<br><b>ISHIHARA SANGYO KAISHA, LTD.</b>   |  |  |

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| 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.   |
| 2. This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.   |
| 3. This report is also accompanied by ANNEXES, comprising:<br>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:<br><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).<br><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.<br>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |
| 4. This report contains indications relating to the following items:<br><input checked="" type="checkbox"/> Box No. I Basis of the report<br><input type="checkbox"/> Box No. II Priority<br><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability<br><input type="checkbox"/> Box No. IV Lack of unity of invention<br><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement<br><input checked="" type="checkbox"/> Box No. VI Certain documents cited<br><input type="checkbox"/> Box No. VII Certain defects in the international application<br><input type="checkbox"/> Box No. VIII Certain observations on the international application   |

|   |                                   |
|---|-----------------------------------|
| Date of submission of the demand        | Date of completion of this report |
| Name and mailing address of the IPEA/JP | Authorized officer                |
| Facsimile No.                           | Telephone No.                     |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2005/002351

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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## Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 21

because:

☒ the said international application, or the said claims Nos. 21  
relate to the following subject matter which does not require an international preliminary examination (*specify*):

The scope of claim 21 includes methods for controlling pests within the human body, which is to say methods for the treatment of the human body by means of therapy (refer to Article 34(4)(a)(i) of the PCT and Rule 67.1(iv) of the Regulations under the PCT) .

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_  
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported  
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 21

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  |
|-----------|--|
| 1.        | Statement  |
|           | Novelty (N)  |
|           | Claims 1-20 YES  |
|           | Claims NO  |
|           | Inventive step (IS)  |
|           | Claims YES   |
|           | Claims 1-20 NO   |
|           | Industrial applicability (IA)  |
|           | Claims 1-20 YES  |
|           | Claims NO  |
| 2.        | Citations and explanations (Rule 70.7)   |
|           | <p>The opinion expressed in the present report is based on the disclosures in each of the following documents, which are cited in the international search report.</p> <p>Document 1: WO 03/024222 A1 (E. I. Du Pont de Nemours and Co.)</p> <p>Document 2: WO 03/015518 A1 (E. I. Du Pont de Nemours and Co.)</p> <p>Document 3: WO 03/015519 A1 (E. I. Du Pont De Nemours and Co.)</p> <p>Document 4: JP 2003-528070 A (E. I. Du Pont De Nemours and Co.)</p> <p>Document 5: JP 11-240857 A (Nihon Nohyaku Co., Ltd.)</p> <p>Document 6: JP 2003-176258 A (Ishihara Sangyo Kaisha, Ltd.)</p> <p>Claims 1 to 20</p> <p>Documents 1 to 4 (claims, examples) disclose anthranilamide derivatives that exhibit a pest controlling action, and also disclose methods for the production thereof. A comparison of the invention set forth in claim 1 and the inventions disclosed in</p> |

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

documents 1 to 4, however, revealed that claim 1 stipulates that the terminal substituent group (A) be an alkyl group that has been substituted with a substitutable C<sub>3-4</sub> cycloalkyl group, whereas documents 1 to 4 stipulate that the groups at the corresponding sites be substituted with a cycloalkyl group or an alkyl group without mentioning substituent groups like those in the former invention; likewise, this comparison also revealed that the present application presents specific applications for the derivatives in question (e.g., the prevention and/or treatment of zoonoses caused by parasites), whereas documents 1 to 4 do not mention the applications in question. Such being the case, the abovementioned inventions are different.

However, document 5 discloses phthalic acid diamide derivatives that have chemical structures similar to the structures of the compounds disclosed in documents 1 to 4, wherein the alkyl group in question has been substituted with a C<sub>3-4</sub> cycloalkyl group (for example, refer to composition "No. 860"), and document 5 goes on to disclose similar applications for said derivatives. Such being the case, it cannot be said to require significant creative abilities for a person skilled in the art to conceive of attempting to substitute the substituent groups disclosed in document 5 for the cycloalkyl group or alkyl group in the compounds disclosed in documents 1 to 4 with the expectation of improving the pest controlling action thereof. Likewise, it cannot be said to require significant creative abilities for a person skilled in the art to conceive of combining the cycloalkyl groups or alkyl groups disclosed in documents 1 to 4 in an attempt to form alkyl groups

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

that have been substituted with a substitutable C<sub>3-4</sub> cycloalkyl group.

With regards to the specific applications of the derivatives, techniques wherein pest controllers are applied in order to prevent and/or treat zoonoses caused by parasites are well known to a person skilled in the art, as disclosed in document 6; therefore, it cannot be said to be especially difficult for a person skilled in the art to conceive of attempting to use the abovementioned compounds in such an application.

Consequently, the inventions set forth in claims 1 to 20 do not involve an inventive step in the light of the disclosures in documents 1 to 6.

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## Box No. VI Certain documents cited

## 1. Certain published documents (Rule 70.10)

| Application No.<br>Patent No. | Publication date<br>(day/month/year) | Filing date<br>(day/month/year) | Priority date (valid claim)<br>(day/month/year) |
|-------------------------------|--------------------------------------|---------------------------------|---|
| WO 2004/067528 A1             | 12.08.2004                           | 21.01.2004                      | 28.01.2003                                      |
| [E, Y]                        |                                      |                                 |   |

## 2. Non-written disclosures (Rule 70.9)

| Kind of non-written disclosure | Date of non-written disclosure<br>(day/month/year) | Date of written disclosure<br>referring to non-written disclosure<br>(day/month/year) |
|--------------------------------|--|---|
|--------------------------------|--|---|